

**NORTHRUP EXHIBIT O**

M. Allen May

⑧ Cells w/ mild Chirality

PCR runs on miles heaters  
Volume ~ 25  $\mu$ l volume wells

2

Heaters

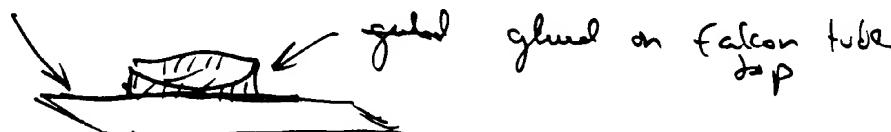
1) Standard runs 20, 20, 30, 40  $\mu$ l

20, 30, 40  $\mu$ l w/ graphite

~ 60  $\mu$ l oil in each pencil tips

water temp:  
max = 15°C  
min = 12°C

2) Device: ~ 60  $\mu$ l run mixture  
~ total exceeds oil



Cycling w/ 7.7 volts } 1.5 W  
200 mA

oil warmt? {  
upline ~ 47 sec } 29 sec = 21st cycle  
down = 23 sec } 15 sec = " "

- Thermocouple touching membrane center
- Type K (?)
- Diameter tip ~ .005" = 100  $\mu$ m

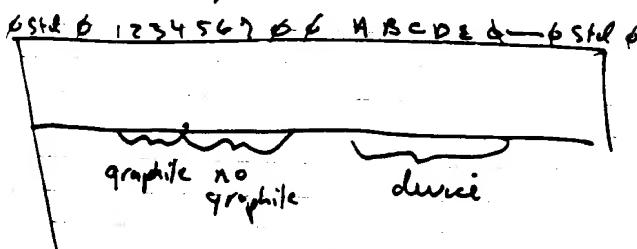
Polymer: ~~0.45~~ thickness 0.4  $\mu$ m  
Glutamin: 0.3  $\mu$ m

Cont

M. all day

- 30 cycles completed on slice
- 25 cycles on standards

Gel:



1	20 $\mu$ l	of graphite	25 cycles
2	30		
3	40		
4	20 $\mu$ l	without graphite	
5	20		
6	20		
7	40		

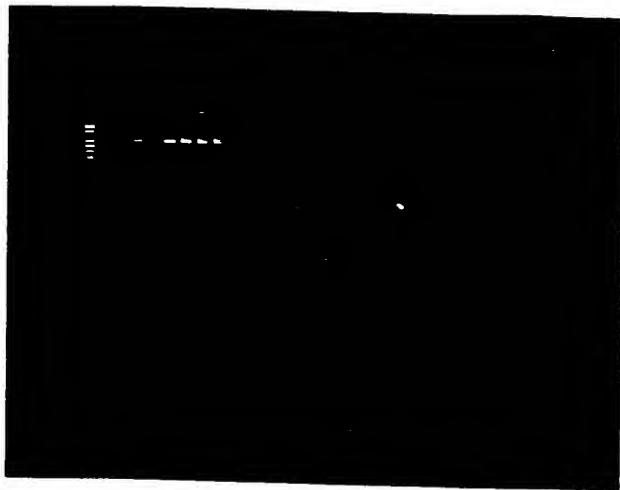
$$A - \Sigma = \text{device} = 30 \text{ cycles}$$

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M. Allen

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negative

### Results:

- Graphite did not have a significant effect (lanes 1-3)
- Primer Dimers formed (in wells) due lanes (9-11) probably to not reaching high enough T to denature
- note this system has 2-base overhang which is less toward primer dimer formation
- evidence of steep T-gradient
- try high T ( $4^\circ$ ) longer 1 min.